



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2020-0212; Product Identifier 2018-SW-097-AD]

RIN 2120-AA64

Airworthiness Directives; Sikorsky Aircraft Corporation Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain Sikorsky Aircraft Corporation Model S-76C helicopters. This proposed AD was prompted by reports of inaccurate main gear box (MGB) indications in flight. This proposed AD would require updating the remote data acquisition unit (RDAU) software and re-identifying the RDAU and, for certain helicopters, updating the software of the display unit (DU) and re-identifying the DU. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact your local Sikorsky Field Representative or Sikorsky's Service Engineering Group at Sikorsky Aircraft Corporation, 124 Quarry Road, Trumbull, CT 06611; phone: 1-800-Winged-S; email: wcs_cust_service_eng.gr-sik@lmco.com. Operators may also log on to the Sikorsky 360 website at <https://www.sikorsky360.com>. You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

Examining the AD Docket

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-0212; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, any comments received, and other information. The street address for Docket Operations is listed above. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Min Zhang, Aviation Safety Engineer, Boston ACO Branch, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7161; email: min.zhang@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2020-0212; Product Identifier 2018-SW-097-AD” at the beginning of your comments. The FAA specifically invites comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. The FAA will consider all comments received by the closing date and may amend this NPRM because of those comments.

The FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The FAA will also post a report summarizing each substantive verbal contact received about this NPRM.

Discussion

The FAA has received reports of inaccurate MGB indications in flight. There have been seven inaccurate oil pressure indications in-flight, including one event in which the flight crew called “Mayday,” and considered ditching the helicopter. There have been no comprehensive root cause findings, but there have been multiple erroneous indications and annunciations, as well as hardware subcomponent failures. There is a possibility of an elevated operating temperature effect on subcomponent reliability, which causes instability in the power supply output. In at least one incident, the malfunction was due to a rare soft failure of a capacitor in the +15Vdc power supply circuit on the engine processor board installed in channel B of the RDAU. This condition

resulted in multiple erroneous values and annunciations on channel B, and if not addressed, could cause the flight crew to land immediately, and consequent possible loss of the helicopter, injury, or fatality. To address this issue, this proposed AD would require updating the RDAU software and re-identifying the RDAU and, for certain helicopters, updating the software of the DU and re-identifying the DU.

Related Service Information under 1 CFR part 51

The FAA reviewed the following Sikorsky service information.

Alert Service Bulletin 76-31-3, Revision B, dated June 26, 2018; Alert Service Bulletin 76-31-4, Revision A, dated May 30, 2018; and Alert Service Bulletin 76-31-5, dated July 31, 2018. This service information describes procedures for updating the RDAU software and re-identifying the RDAU. This service information also describes procedures for sending the inspection results to Sikorsky Aircraft Corporation. These documents are distinct since they apply to specific helicopter models in different configurations (different part numbered RDAU units).

Service Bulletin 76-006, Revision A, dated August 23, 2018. This service information describes procedures for updating the software of DU part number 76450-01098-101, and re-identifying the DU as part number 76450-01098-108. This service information also describes procedures for sending the inspection results to Sikorsky Aircraft Corporation.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

FAA's Determination

The FAA is proposing this AD after evaluating all the relevant information and determining the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require accomplishing the actions specified in the service information described previously, except as discussed under “Differences Between this Proposed AD and the Service Information.”

Differences Between this Proposed AD and the Service Information

The service information recommends accomplishing the update of the RDAU software and re-identification of the RDAU and, for certain helicopters, update of the software of the DU and re-identification of the DU, depending on service information, no later than a specific calendar date (April 30, 2019 for Alert Service Bulletin 76-31-3, Revision B, dated June 26, 2018; June 30, 2019 for Alert Service Bulletin 76-31-4, Revision A, dated May 30, 2018; or July 31, 2019 for Alert Service Bulletin 76-31-5, dated July 31, 2018). In developing an appropriate compliance time for this AD, the FAA considered factors including the manufacturer's recommendation, the degree of urgency associated with the subject unsafe condition, and the average utilization of the affected fleet. After considering these factors, the FAA finds that a 500 hour time-in-service compliance time (which is approximately one year based on the average annual flight hours for Sikorsky Aircraft Corporation Model S-76C helicopters) represents an appropriate interval of time for affected helicopters to continue to operate without compromising safety.

Costs of Compliance

The FAA estimates that this proposed AD affects 99 helicopters of U.S. registry.

The FAA estimates the following costs to comply with this proposed AD:

Estimated costs for required actions

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Update RDAU software (99 helicopters)	3 work-hours X \$85 per hour = \$255	*	\$255	\$25,245
Update display units (52 helicopters)	7 work-hours X \$85 per hour = \$595	*	\$595	\$30,940
Reporting (99 helicopters)	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$8,415

* The FAA has received no definitive data that would enable the FAA to provide parts cost estimates for the actions specified in this proposed AD.

According to the manufacturer, some or all of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected individuals. The FAA does not control warranty coverage for affected individuals. As a result, the FAA has included all known costs in the cost estimate.

Paperwork Reduction Act

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number. The control number for the collection of information required by this proposed AD is 2120-0056. The paperwork cost associated with this proposed AD has been detailed in the Costs of

Compliance section of this document and includes time for reviewing instructions, as well as completing and reviewing the collection of information. Therefore, all reporting associated with this proposed AD is mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national

Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

(1) Is not a “significant regulatory action” under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

Sikorsky Aircraft Corporation: Docket No. FAA-2020-0212; Product Identifier 2018-SW-097-AD.

(a) Comments Due Date

The FAA must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Sikorsky Aircraft Corporation Model S-76C helicopters, certificated in any category, equipped with remote data acquisition unit (RDAU) part number 76450-01098-106, 76450-01098-107, or 76450-01098-109.

(d) Subject

Joint Aircraft Service Component (JASC) Code 3100, Indicating/recording system.

(e) Unsafe Condition

This AD was prompted by reports of inaccurate main gear box (MGB) indications in flight. The FAA is issuing this AD to address inaccurate MGB indications in flight, resulting in multiple erroneous values/annunciations on channel B, which could cause the flight crew to land immediately, and consequent possible loss of the helicopter, injury, or fatality.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) RDAU and Display Unit (DU) Updates

Within 500 hours time-in-service after the effective date of this AD, do the actions specified in paragraphs (g)(1) through (4) of this AD, as applicable to your helicopter.

(1) For helicopters equipped with RDAU part number 76450-01098-109, update the RDAU software and re-identify the RDAU in accordance with Section 3., Paragraphs

A. through J. of the Accomplishment Instructions of Sikorsky Alert Service Bulletin 76-31-3, Revision B, dated June 26, 2018, except you are not required to return the RDAU to Parker Fluid Systems Division (FSD).

(2) For helicopters equipped with RDAU part number 76450-01098-107, update the RDAU software and re-identify the RDAU in accordance with Section 3., Paragraphs A. through J. of the Accomplishment Instructions of Sikorsky Alert Service Bulletin 76-31-4, Revision A, dated May 30, 2018, except you are not required to return the RDAU to Parker FSD.

(3) For helicopters equipped with RDAU part number 76450-01098-106, update the RDAU software and re-identify the RDAU in accordance with Section 3., Paragraphs A. through K. of the Accomplishment Instructions of Sikorsky Alert Service Bulletin 76-31-5, dated July 31, 2018, except you are not required to return the RDAU to Parker FSD.

(4) For helicopters equipped with RDAU part number 76450-01098-106, update the software of DU part number 76450-01098-101 and re-identify the DU as part number 76450-01098-108, in accordance with Section 3., Paragraphs A. through J. of the Accomplishment Instructions of Sikorsky Service Bulletin 76-006, Revision A, dated August 23, 2018, except you are not required to return the DU to Parker FSD.

(h) Parts Installation Limitations

As of the effective date of this AD, no person may install, on any helicopter, a DU part number 76450-01098-101, unless it has been modified in accordance with the requirements of paragraph (g)(4) of this AD.

(i) Reporting

At the applicable time specified in paragraph (i)(1) or (2) of this AD, submit a report of compliance with the actions specified in paragraphs (g)(1) through (4) of this AD, as applicable to your helicopter. The report must include the document number and title of the service information used, the owner and/or operator of the helicopter, the submitter's name, date, and the helicopter serial number. Submit the report to Sikorsky Aircraft Corporation in accordance with Section 3., Paragraph A. (Record of Compliance) of the Accomplishment Instructions of Sikorsky Alert Service Bulletin 76-31-3, Revision B, dated June 26, 2018; Section 3., Paragraph L. of the Accomplishment Instructions of Sikorsky Alert Service Bulletin 76-31-4, Revision A, dated May 30, 2018; Section 3., Paragraph M. of the Accomplishment Instructions of Sikorsky Alert Service Bulletin 76-31-5, dated July 31, 2018; or Section 3., Paragraph L. of the Accomplishment Instructions of Sikorsky Service Bulletin 76-006, Revision A, dated August 23, 2018, as applicable to your helicopter.

(1) If the inspection was done on or after the effective date of this AD: Submit the report within 30 days after the inspection.

(2) If the inspection was done before the effective date of this AD: Submit the report within 30 days after the effective date of this AD.

(j) Credit for Previous Actions

(1) This paragraph provides credit for the actions required by paragraphs (g)(1) and (i) of this AD, if those actions were performed before the effective date of this AD using Sikorsky Alert Service Bulletin 76-31-3, dated March 2, 2018; or Sikorsky Alert Service Bulletin 76-31-3, Revision A, dated March 29, 2018.

(2) This paragraph provides credit for the actions required by paragraphs (g)(2) and (i) of this AD, if those actions were performed before the effective date of this AD using Sikorsky Alert Service Bulletin 76-31-4, dated May 17, 2018.

(3) This paragraph provides credit for the actions required by paragraphs (g)(4) and (i) of this AD, if those actions were performed before the effective date of this AD using Sikorsky Service Bulletin 76-006, dated July 26, 2018.

(k) Paperwork Reduction Act Burden Statement

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

(l) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Boston ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In

accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (m)(1) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(m) Related Information

(1) For more information about this AD, contact Min Zhang, Aviation Safety Engineer, Boston ACO Branch, 1200 District Avenue, Burlington, MA 01803; phone: (781) 238-7161; email: min.zhang@faa.gov.

(2) For service information identified in this AD, contact your local Sikorsky Field Representative or Sikorsky's Service Engineering Group at Sikorsky Aircraft Corporation, 124 Quarry Road, Trumbull, CT 06611; phone: 1-800-Winged-S; email: wcs_cust_service_eng.gr-sik@lmco.com. Operators may also log on to the Sikorsky 360 website at <https://www.sikorsky360.com>. You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

Issued on March 31, 2020.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

